ABSTRACT

Methods and apparatus for performing 2:1 downscaling on video data are provided. At least one input matrix of NxN (e.g., N=16) Discrete Cosine Transform (DCT) coefficients is formed from the video data by combining four N/2xN/2 field-mode DCT blocks. Vertical downsampling and de-interlacing are performed to the input matrix to obtain two N/2xN/2 frame-mode DCT blocks. An NxN/2 input matrix is formed from the two frame-mode DCT blocks. Horizontal downsampling is performed to the NxN/2 matrix to obtain one N/2xN/2 frame-mode DCT block.